PSYC63Y Research in Physiological Psychology
Winter 1995

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Office Hours: Thurs. 1-3
-or by appointment

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Lectures - Thurs. 11-1 Room - R3225

Practical - W 2-5 Room S148

Animal Testing - S-148, S-149
Animal Housing - S705
Disposal of Animals - S-138

Keys for these rooms can be signed out by students enrolled in this course at the security desk at the third floor entrance to the Science Wing.

Course Description

This part of the course will provide students with an introduction to many of the techniques used in neuroscience research. For example, students will learn about various behaviourial, electrophysiological, neurosurgical, neuroanatomical, and histological techniques. The course will also provide an opportunity for students to design and execute an original scientific experiment using some of these techniques. Lectures will focus on the theory and utility of these techniques, as well as on how to design an experiment. The laboratory sessions will be used to demonstrate and provide students with 'hands on' experience with many of these techniques.

Text

There is no text for the course. However, several books and other materials that provide useful background and reference material are on reserve in the library.

Evaluation

Your grade for the winter term will be out of 100 possible points (based on the following) and will count for 50% of your final mark for the course.

Midterm Exam (Wed. March 29).....30%

Written Report of Experiment (due April 7; last day of classes).....40%

Written Summaries of Demonstrations (due the week following each demo.).....10%

Introduction and Methods of experiment (due Feb. 22) - this will count toward part of the 10% assigned for the written summaries

Laboratory Performance.....20%

Midterm Exam

The midterm exam will consist of multiple choice, fill-in-the-blank and short answer questions. Students will be responsible for all material covered in lectures, demonstrations, as well as all assigned readings. The only acceptable explanation for missing the test is one a note written by a medical doctor (i.e., an M.D.). Otherwise, a '0' will be recorded.

Written Report

The written report is to be comprised of 3 parts. The first part is to be based on the experiment carried out in the second term. The format of this first part should conform to that of articles published in the Journal of Neuroscience. This part of the report should be between 10 and 15 pages typed and double spaced.

The second part of the report should describe in 1 to 2 pages in what ways the experiment could have been improved. For example, if there were any problems, how could they have been overcome? Or, would there have been a more suitable way of conducting the experiment.

Finally, in the third part of the report propose an original experiment related to the one you completed in the course. Give reasons why you would do this experiment and briefly describe how you would do the experiment and what results you might expect. This part of the paper should be 3-5 pages.

The final report is due April 7, 1992. If the paper is late, 5 points/day will be deducted.

Written Summaries

There will be a number of demonstrations of various experimental techniques throughout the course. A 2 page summary briefly describing the technique and its uses in neuroscience research is to be handed in the Wednesday following the demonstration (i.e., in the next laboratory meeting). A total of 10% is allotted for these summaries. Thus, if there are four demonstrations, then each summary will be worth 2.5%. If there are five summaries, then they will be worth 2% each, and so on.

You will note that you are to hand in a draft of the introduction and methods of what will be your final paper for the course. These will be read and marked by the TAs and returned to you with comments. The mark assigned will count toward the 10% allocated for the written summaries. Submitting a draft of these two parts of the paper in Feb. will provide you with comments that you can then incorporate into your final draft.

Laboratory Performance

This portion of your mark will be based on participation and the proper following of procedures. Quizzes may also be given at the discretion of the teaching assistants.

Schedule

Given the unpredictable nature of scientific experiments, particularly novel experiments (i.e., not canned experiments) it is difficult to lay out an accurate schedule of events in advance. Thus, for now a general month-by-month outline is given. As we begin to run the experiment, we will be in a better position to schedule the various aspects of the experiment on a week-by-week basis.

Please note that the date of the test and the date for when the paper is due will not be affected by the scheduling of the experiment.

Month	Lecture	Laboratory
January	visual system, electrophysiological techniques	-designing the experiment -running the experiment
February	electrophysiology, EEG electrical stimulation	-experiment continued
Feb. 13-17	Reading Week	
Feb. 22	INTRO and METHODS DUE	
March	Intracellular recording, patch clamp iontophoresis, making solutions	-experiment continued
Mar. 29	TEST	
April		experiment completed
Apr. 7	PAPERS DUE	